

# Burn Barrel Reduction Campaign



Minnesota Pollution  
Control Agency





# Why are we concerned?

- Affects the health of your family & neighbors
- Contaminates crops and livestock
- Causes nearly half of all wildfires in MN
- May have long-term economic impacts on MN agriculture



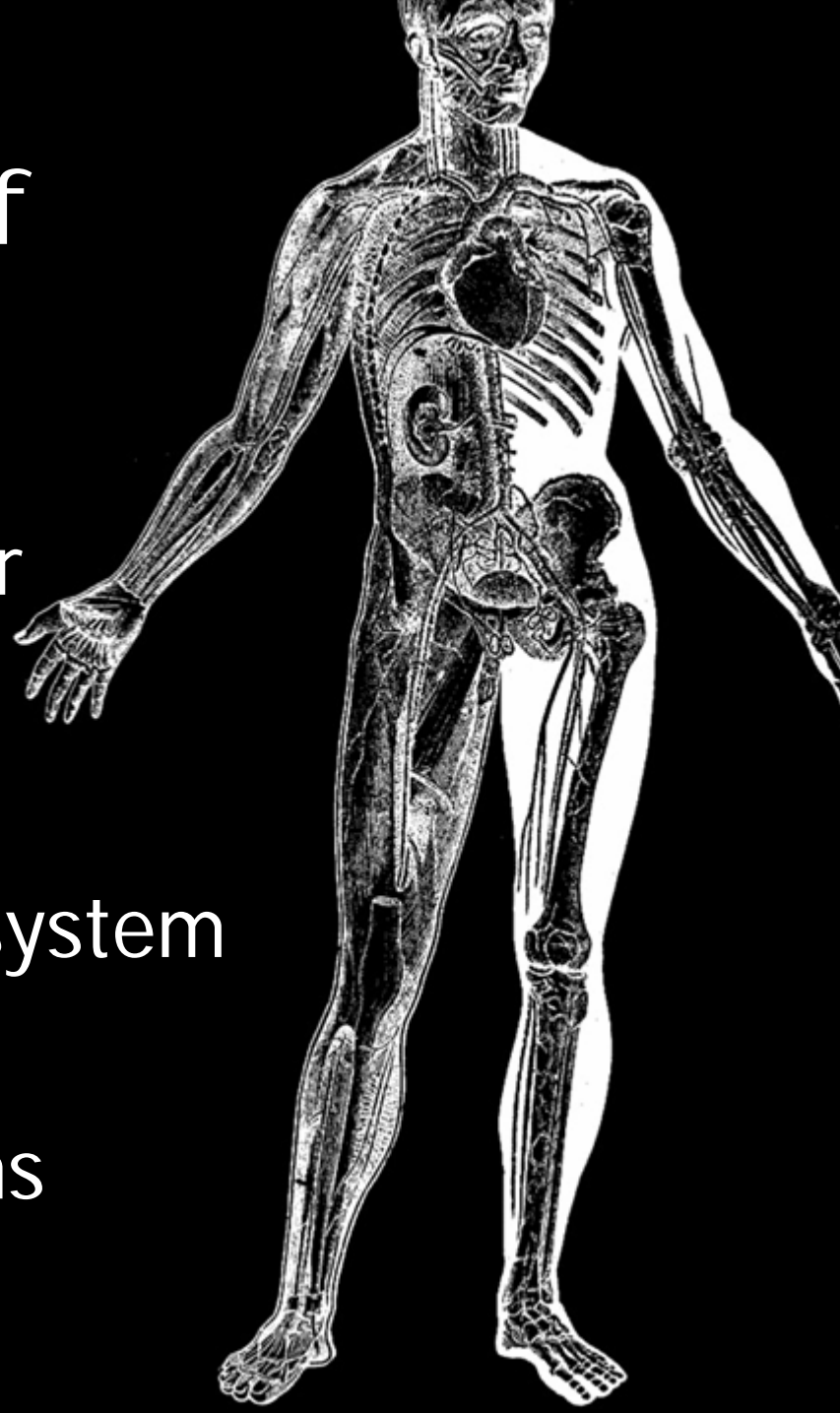
# Toxic smoke

- dioxin
- ash
- furans
- halogenated hydrocarbons
- carbon monoxide
- Lead
- barium
- chromium
- cadmium
- carbon dioxide
- sulfur dioxide
- arsenic
- mercury



# Health effects of dioxin

- Increased risk of cancer
- Impairment of:
  - immune system
  - developing nervous system
  - endocrine system
  - reproductive functions



# Backyard burning vs. municipal incinerators

- Burn barrel temperatures rarely exceed 500°F so combustion is incomplete.
- Municipal incinerators operate at 2,200°F to ensure complete combustion, and use efficient filters to reduce harmful emissions.
- Garbage burned in a burn barrel gives off twice as many furans, 40 times as much ash, and as much or more dioxin as a municipal incinerator (and may be much higher depending on what's burned).





One pound of garbage  
burned here...



emits as much or  
more dioxin as 1 ton  
of MSW burned here.





The problem with backyard burning is not just emissions but also exposure.

Most burning occurs in rural areas where emissions readily contaminate fodder and animal grazing lands – dairy cows, beef, poultry, etc. (2/3's of human uptake meat/dairy).



# MN study: Key findings

- 45% of respondents said they occasionally use a burn barrel or some other method to dispose of their garbage, including paper.
  - Northwest 38%
  - Northeast 36%
  - Central 30%
  - Southwest 64%
  - Southeast 58%
- 25% of residents with garbage hauling service occasionally burn, as do 67% who use a nearby disposal site.
- Less than half of all respondents who burn are farmers; the remainder is made up of businesses, cabin-owners, and rural residents (majority).



# Priority: Reduce use of burn barrels

- Remains largest source of dioxin emissions.
  - *By 2005, will account for more than half of all quantified sources.*
- Emissions in MN thousands of times higher than output from modern, well-controlled MSW incinerators.
- Well over half a million Minnesotans and up to 20 million, mostly rural Americans burn garbage.
- Contaminates animal feed and food crops; accentuates bio-accumulation.
- Contributes to GHG and PM emissions.
- Levels dropped to half (55 to 25 PPT), but minimum threshold much lower than previously thought (1 PPT).

# Statutes regulating burning

## Chapter 17

### Dept. of Agriculture



- Minn. Stat. 17.135 – Allows farmers to burn household & farm waste if county board has NOT passed a resolution saying solid waste pickup is readily available and If its done in a “pollution-free manner”.
- Based on available data, our position is that you cannot burn garbage in a pollution-free manner

Note: Other statutes (88.16, 88.17 & 88.22) must still be followed.







# How do we change behavior?

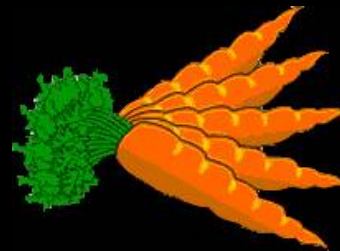
The solutions to changing behavior vary from place-to-place, but these four elements play a role in successful programs:



- education



- infrastructure



- incentive



- enforcement

# Education

## Media Campaign

### Bernie the Burn Barrel

- Posters, factsheets, brochures
- Clip art
- Radio, TV ads





## Hey Kids!

Hear what Bernie  
the Burn Barrel has  
to say about the  
dangers of backyard  
garbage burning.

**PRESS BUTTON  
TO LISTEN**



"Bernie the Burn Barrel" was  
developed by the Western Lake  
Superior Sanitary District, with  
support from the EPA's Great Lakes  
National Program Office.





# Infrastructure

- Hauler coverage
- Staffed and un-staffed drop-off sites
- Houston County rural sheds
  - Reduced dumping/burning
  - Per-HH fee funds
  - Paying for it so residents use
  - Become a place to catch up w/ neighbors



# Incentives

## **Burn Barrel Buy-Back Program**

- Chisago passed County no-burn resolution
- Teamed up w/ haulers and offered ½ price garbage service for 6 months
- Sign no-burn pledge, turn in barrel
- Cut burn barrel use nearly in ½ in 4 years

# Enforcement

- ½ time position in Sheriff dept.
- \$30,000/yr (SW fee)
- Would fund w/o SW money
- Gateway to many other violations (meth, etc.)
- Did in 1 day what took 8 mo. in past
- 1<sup>st</sup> time in 20 years making a difference – not just a band-aid



# Campaign basics

- Strategic plan goal: Reduce emissions by 50% by 2008
- 2005 Solid Waste Policy Report recommends:
  - Eliminate burn barrels by 2010.
  - 2006-2010: Work on reduction initiatives.
  - Report to 2007 Legislature on effectiveness of reduction initiatives.

# Campaign basics

## Phase One

- Do regional and county board presentations – educate on issues, program ideas, grants, no-burn resolutions.
- Ask the question “What will it take to get your residents to change their behavior?”
- Fund and support local/regional burn barrel buy-back campaigns and related reduction/education initiatives.



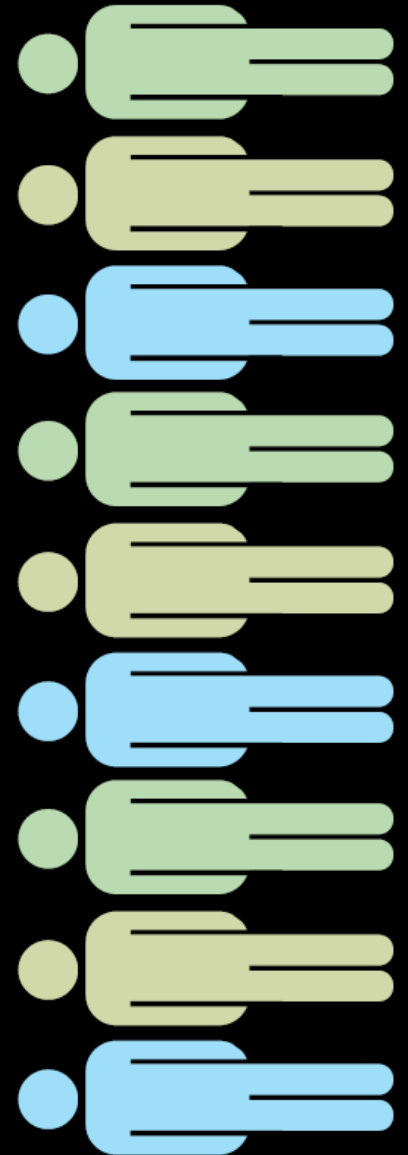
# Campaign basics

## Phase Two

- Continue reduction initiatives
- Conduct statewide/regional media campaign (e.g., Bernie the Burn Barrel).
- Report to Legislature on progress and recommend further steps to achieve reduction goal by 2010

# Many partners

- counties
- cities
- townships
- farmers
- haulers
- DNR
- Dept. of Ag
- MDH
- EPA
- businesses
- extension
- lake associations
- fire department
- insurance companies
- citizens
- elected officials



# Discussion

- Do you think backyard burning is a problem? What is your main concern?
- Does your county have regular garbage pickup available countywide? Garbage disposal options available countywide?
- How much (if any) not covered by each?
- What would it take to cover those areas?
- Would you pass a no-burn resolution?  
Would sample language help?

# Discussion (cont.)

- Would you consider permitting burners?
  - Know how many people are burning
  - Know who is burning (enforce., meas., permit)
- What do you need from the state (resources, time, money, enforcement)?  
What reduction approaches would be most appealing?
- Do you support the elimination of backyard burning by 2010?
- Would a change or elimination of 17.135 help local reduction efforts?